all of the material then available — when the number of currently recognized forms was raised from six to twenty-one. Dr. Merriam's work, however, cleared the way for a better conception of the group, rectifying important errors of nomenclature and making known many new forms. Mr. Osgood, with fifteen times this amount of material, seems to have settled all of the remaining doubts regarding the application of certain early names, and, besides coördinating the work of his predecessors, has immensely extended our knowledge of the group. The paper is admirable from every point of view and does great credit to its author.

J. A. A.

The Eighteenth Annual Report of the Fishing Board for Scotland. — In this report Thomas Scott gives an interesting local list of the fishes of the Firth of Clyde. The determination of species seems to be accurate, and the nomenclature is more modern than usual in British lists.

Mr. H. C. Williamson attempts by means of very many measurements to ascertain whether a racial difference exists between the mackerel of the east and west coasts of Scotland. He uses the means employed for the distinction of races among men and lately used by Heincke for the definition of races of herring. The Mean, the Probable Error of the Mean, and the Standard Deviation are derived from the formula given in Davenport's *Statistical Methods*.

By these mathematical means the alleged variation in the mackerels of Scotland is elaborately investigated, with negative results, the races not being sufficiently marked to require recognition.

Mr. H. M. Kyle, of St. Andrews, has a suggestive and valuable discussion of the origin and mutual relations of the different groups of flounders and soles. The arrangement adopted agrees in general with that of Jordan and Evermann, which is based largely on earlier researches of Dr. Gill. He would differ from Jordan and Evermann in reducing somewhat the number of genera, and in separating the Paralichthys type as a subfamily distinct from Hippoglossinæ. To this subfamily, which he calls Hippoglosso-rhombinæ, he would add the allies of Syacium and Citharichthys. The soles constitute in his view three additional subfamilies, Achirinæ, Soleinæ, and Cynoglossinæ. The affinities of these groups are obscured by making the soles a distinct family, the three subfamilies being separately reduced or degenerated groups of flounders. To all this there is no serious objection, though Citharichthys and its allies seem to us rather closer to the Psettinæ (or Rhombinæ, as Mr. Kyle prefers to call them,

though the name "Rhombus" is properly used only for another type of fish). The allies of Xystreurys are, moreover, really intermediate between Paralichthys and the Hippoglossinæ.

Mr. Kyle has added considerably to our knowledge of the olfactory structures of the different groups and to our knowledge of the shoulder girdle. His discussion of the origin of the different groups is pertinent and sagacious. It is to be hoped that Mr. Kyle will continue this line of work, and that he may secure specimens and skeletons of the numerous genera which he has not yet examined. We may note in passing that the genus Mancopsetta is of Gill.

D. S. J.

Gill and Smith on American Moringuoid Eels. — A singular group of eels of low structure, and distinguished among other things by the extreme shortness of the tail and the backward location of the heart, is the family of Moringuidæ. It has been supposed to be exclusively East Indian, one species ranging northward as far as the Liu-Kiu Islands of Japan.

Dr. Gill and Dr. H. M. Smith record in *Science* (June 22, p. 973) the discovery of a species of Aphthalmichthys, a genus of this group, from a coral reef near San Juan, Puerto Rico. Further study of this type shows that the very slender whip-like eels of the West Indies, constituting the subfamily Stilbiscinæ, are in fact genuine Moringuidæ. Stilbiscus proves to be identical with Moringua. Gordichthys must belong to the same group and probably Neoconger also, thus giving four genera in America, as compared with the three (Moringua, Raitaboura, and Aphthalmichthys) found in the East Indies. The family is thus almost as well represented in the West Indies as in the East. All the American species are very rare. The species from Puerto Rico is to be described as *Aphthalmichthy caribbæus* Gill and Smith.

D. S. J.

Transplanting of California Trout. — Students of trout in California have noticed a number of anomalies in the distribution of the different forms. The writer has been interested in following these out, and now wishes to place on record for the reference of future naturalists the facts in regard to them. If the investigation had been delayed a few years until the clues were lost, these cases would be altogether inexplicable.

In the tributaries of Feather River, around Prattsville in Plumas County, is found the Lake Tahoe trout, *Salmo henshawi*. I learn